

SEQUENCE LISTING

<110> Chiquet-Ehrismann, Ruth  
Scherberich, Arnaud

<120> TENASCIN-W COMPOSITIONS AND USES THEREOF

<130> 1/32411A/USN/FMI

<140> 10/509,009  
<141> 2004-09-24

<150> PCT/EP03/03150  
<151> 2003-03-26

<150> GB0207224.7  
<151> 2002-03-27

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<223> Mouse tenascin-W

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Ser Val Leu Leu Val Ala Ser Ala Pro Ala Thr Pro Glu Ser Pro Gly  
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tgc agc aac aaa gag caa cag gtc act gtt agc cac acc tac aag att 144  
Cys Ser Asn Lys Glu Gln Gln Val Thr Val Ser His Thr Tyr Lys Ile  
35 40 45

gac gtg ccc aag tct gct ctg gtt caa gta gag acc cca cag tca 192  
Asp Val Pro Lys Ser Ala Leu Val Gln Val Glu Thr Asp Pro Gln Ser  
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ctc agc gat gat ggg aca tca ctc ttg gct ccc ggg gag gat ggg gag 240  
Leu Ser Asp Asp Gly Thr Ser Leu Leu Ala Pro Gly Glu Asp Gly Glu  
65 70 75 80

gag cag aac att atc ttc agg cac aac atc cgt ctt cag aca ccg cag 288  
Glu Gln Asn Ile Ile Phe Arg His Asn Ile Arg Leu Gln Thr Pro Gln  
85 90 95

aag aat tgc gac ctg gca gac agt gtc cag gac ctg cta gcc cgg atg 336  
Lys Asn Cys Asp Leu Ala Asp Ser Val Gln Asp Leu Leu Ala Arg Met

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aaa aag ctg gag gaa gag atg gca gag ctg aag gag cag tgc aat acc Lys Lys Leu Glu Glu Glu Met Ala Glu Leu Lys Glu Gln Cys Asn Thr	115	120	125	384
aac cgc tgc tgc cag ggg gct gct gat ctg agc cgt cac tgc agt ggc Asn Arg Cys Cys Gln Gly Ala Ala Asp Leu Ser Arg His Cys Ser Gly	130	135	140	432
cac ggg acc ttc ctc cct gag acc tgc agc tgc cac tgt gac cag ggc His Gly Thr Phe Leu Pro Glu Thr Cys Ser Cys His Cys Asp Gln Gly	145	150	155	480
tgg gag ggc gca gac tgt gat cag ccc acc tgt cct ggg gct tgc aac Trp Glu Gly Ala Asp Cys Asp Gln Pro Thr Cys Pro Gly Ala Cys Asn	165	170	175	528
ggc cac ggg cgc tgt gtg gat ggg cag tgc gtg tgt gac gcg ccc tat Gly His Gly Arg Cys Val Asp Gly Gln Cys Val Cys Asp Ala Pro Tyr	180	185	190	576
gtg ggg gtc gac tgc gcc tac gcc gcc tgt ccc cag gac tgc agt ggg Val Gly Val Asp Cys Ala Tyr Ala Ala Cys Pro Gln Asp Cys Ser Gly	195	200	205	624
cat ggc gtg tgc gtg cag ggt gtc tgc cag tgc cac gag gac ttc aca His Gly Val Cys Val Gln Gly Val Cys Gln Cys His Glu Asp Phe Thr	210	215	220	672
gca gag gac tgc agc gag cag cgc tgt cct ggc gac tgt agt ggc aat Ala Glu Asp Cys Ser Glu Gln Arg Cys Pro Gly Asp Cys Ser Gly Asn	225	230	235	720
ggt ttc tgt gac act ggc gag tgt tac tgt gag atg ggc ttt act ggc Gly Phe Cys Asp Thr Gly Glu Cys Tyr Cys Glu Met Gly Phe Thr Gly	245	250	255	768
ccc gac tgt tcc cag gtg gtg gct cct cag ggc ctg cag ttg ctc aag Pro Asp Cys Ser Gln Val Val Ala Pro Gln Gly Leu Gln Leu Leu Lys	260	265	270	816
agc acg gag aac tct ctg ctg gtg agt tgg gag ccc tcc agt gag gta Ser Thr Glu Asn Ser Leu Leu Val Ser Trp Glu Pro Ser Ser Glu Val	275	280	285	864
gac tac tac ctg ctc agc tac tac ccc ctg ggg aag gag caa gct aca Asp Tyr Tyr Leu Leu Ser Tyr Tyr Pro Leu Gly Lys Glu Gln Ala Thr	290	295	300	912
aaa cag gtc cgg gta ccc aag gag cag cac acc tat gac atc acc ggc Lys Gln Val Arg Val Pro Lys Glu Gln His Thr Tyr Asp Ile Thr Gly	305	310	315	960
ttg ctg cct gga acc aag tac ata gtc acc ctg cgc aac gtg aag aaa Leu Leu Pro Gly Thr Lys Tyr Ile Val Thr Leu Arg Asn Val Lys Lys	325	330	335	1008
gac att tcc agc agc cct cag cat cta ctt gcc acc aca gac ctt gct Asp Ile Ser Ser Pro Gln His Leu Leu Ala Thr Thr Asp Leu Ala	340	345	350	1056

gtg ctt ggc act gcc tgg gta aat gaa gag act gag aca tcc ctc gat		1104
Val Leu Gly Thr Ala Trp Val Asn Glu Glu Thr Glu Thr Ser Leu Asp		
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gtg gag tgg gag aac cct ctg act gag gtg gac tat tac aag ctt cg		1152
Val Glu Trp Glu Asn Pro Leu Thr Glu Val Asp Tyr Tyr Lys Leu Arg		
370	375	380
tat ggc ccc tta aca ggg cag gag gtg aca gag gtc act gtg ccc aag		1200
Tyr Gly Pro Leu Thr Gly Gln Glu Val Thr Glu Val Thr Val Pro Lys		
385	390	395
395	400	
agc cgt gat ccc aag agc aga tat gac atc act ggt ctg cag cct gga		1248
Ser Arg Asp Pro Lys Ser Arg Tyr Asp Ile Thr Gly Leu Gln Pro Gly		
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acg gaa tat aaa atc aca gtt gtg ccc atc cga ggt gat ctg gag gga		1296
Thr Glu Tyr Lys Ile Thr Val Val Pro Ile Arg Gly Asp Leu Glu Gly		
420	425	430
aag ccg att ctc ctg aat ggc agg aca gaa att gat gga cca acc aat		1344
Lys Pro Ile Leu Leu Asn Gly Arg Thr Glu Ile Asp Gly Pro Thr Asn		
435	440	445
gtg gtc aca aat cag gtg aca gaa gac aca gca tct gtt tcc tgg gat		1392
Val Val Thr Asn Gln Val Thr Glu Asp Thr Ala Ser Val Ser Trp Asp		
450	455	460
cca gtg agg gct gac ata gac aag tat gtg gtg cgc tat atc gcc ccc		1440
Pro Val Arg Ala Asp Ile Asp Lys Tyr Val Val Arg Tyr Ile Ala Pro		
465	470	475
480		
gat ggg gag acc aag gag aag gca gta cca aag gac cag agc agc acc		1488
Asp Gly Glu Thr Lys Glu Lys Ala Val Pro Lys Asp Gln Ser Ser Thr		
485	490	495
gtt ctc aca ggc ctg aag cca gga gag gcc tac aaa gtc ttt gtg tgg		1536
Val Leu Thr Gly Leu Lys Pro Gly Glu Ala Tyr Lys Val Phe Val Trp		
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gct gag agg ggc aac caa ggc agc aag aaa gca gac acc aag gcc ctc		1584
Ala Glu Arg Gly Asn Gln Gly Ser Lys Lys Ala Asp Thr Lys Ala Leu		
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Thr Glu Ile Asp Ser Pro Glu Asn Leu Val Thr Asp Arg Val Thr Glu		
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aac agc ctc tct gtc tcg tgg gac cca gtg gag gct gac atc gac agg		1680
Asn Ser Leu Ser Val Ser Trp Asp Pro Val Glu Ala Asp Ile Asp Arg		
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tat gtg gta agc tac act tcc gtg gat gga gag acg aag cag gtt cca		1728
Tyr Val Val Ser Tyr Thr Ser Val Asp Gly Glu Thr Lys Gln Val Pro		
565	570	575
gtg aag aag gac cag agg agc acc gtc ctc acc ggc ctg agt ccc ggt		1776
Val Lys Lys Asp Gln Arg Ser Thr Val Leu Thr Gly Leu Ser Pro Gly		
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595 600 605	
aag aag gcc aac acc aag gct ccc aca gac atc gac agc ccc aaa aac Lys Lys Ala Asn Thr Lys Ala Pro Thr Asp Ile Asp Ser Pro Lys Asn	1872
610 615 620	
ttg gta act gac cag gtg aca gag aac act ctc agt gtc tcc tgg gac Leu Val Thr Asp Gln Val Thr Glu Asn Thr Leu Ser Val Ser Trp Asp	1920
625 630 635 640	
cct gtt cag gcc aac att gac agg tat atg gtg agc tac acc tct gcc Pro Val Gln Ala Asn Ile Asp Arg Tyr Met Val Ser Tyr Thr Ser Ala	1968
645 650 655	
gat gga gag aca aga gag gtc cca gtg cct aag gag aag agc agt acc Asp Gly Glu Thr Arg Glu Val Pro Val Pro Lys Glu Lys Ser Ser Thr	2016
660 665 670	
gtc ctg act ggc ctg agg cca ggt gtg gag tac aag gtc cat gtg tgg Val Leu Thr Gly Leu Arg Pro Gly Val Glu Tyr Lys Val His Val Trp	2064
675 680 685	
gcc cag aag ggg acc cag gag agc aga aag gcc aac acc aag gcc ccc Ala Gln Lys Gly Thr Gln Glu Ser Arg Lys Ala Asn Thr Lys Ala Pro	2112
690 695 700	
aca gat att gat ggc ccc aaa aac ctg gtg act gac cag gtg acc gag Thr Asp Ile Asp Gly Pro Lys Asn Leu Val Thr Asp Gln Val Thr Glu	2160
705 710 715 720	
acc act ctt agt gtc tcc tgg gac cca gtg gag gct gac att gat agg Thr Thr Leu Ser Val Ser Trp Asp Pro Val Glu Ala Asp Ile Asp Arg	2208
725 730 735	
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740 745 750	
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755 760 765	
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770 775 780	
cgg aag gcc aac acc aag gcc ccc aca gat att gac agc cct aaa aac Arg Lys Ala Asn Thr Lys Ala Pro Thr Asp Ile Asp Ser Pro Lys Asn	2400
785 790 795 800	
cta gtg act gag cag gtg gca gag agc act gcc acc gtg tcc tgg gac Leu Val Thr Glu Gln Val Ala Glu Ser Thr Ala Thr Val Ser Trp Asp	2448
805 810 815	
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820 825 830	
gat gga gag acc agg gag att cca gtg agg aag gag aag agc agc act	2544

Asp	Gly	Thr	Arg	Glu	Ile	Pro	Val	Arg	Lys	Glu	Lys	Ser	Ser	Thr		
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gtc	ctc	aca	ggc	ctg	aga	ccg	ggt	gtg	gag	tac	acg	gtc	caa	gtg	tgg	2592
Val	Leu	Thr	Gly	Leu	Arg	Pro	Gly	Val	Glu	Tyr	Thr	Val	Gln	Val	Trp	
850				855					860							
gct	cag	aag	ggg	gcc	cg	gag	agc	aag	aag	gcc	aaa	acc	aag	gcc	ccc	2640
Ala	Gln	Lys	Gly	Ala	Arg	Glu	Ser	Lys	Lys	Ala	Lys	Thr	Lys	Ala	Pro	
865				870					875					880		
aca	gaa	att	gac	agc	ccc	aag	aac	ttg	gtg	acc	aac	cga	gtg	aca	gaa	2688
Thr	Glu	Ile	Asp	Ser	Pro	Lys	Asn	Leu	Val	Thr	Asn	Arg	Val	Thr	Glu	
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aat	aca	gcc	acc	atc	tcc	tgg	gac	cca	gtg	cga	gcc	aac	att	gac	agg	2736
Asn	Thr	Ala	Thr	Ile	Ser	Trp	Asp	Pro	Val	Arg	Ala	Asn	Ile	Asp	Arg	
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tac	atg	gtt	cgc	tac	acc	tct	gcf	gat	gga	gag	act	aag	gag	att	cca	2784
Tyr	Met	Val	Arg	Tyr	Thr	Ser	Ala	Asp	Gly	Glu	Thr	Lys	Glu	Ile	Pro	
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gtg	tca	aag	gat	cag	agt	aac	acc	atc	ctg	aca	ggc	ctg	aaa	cca	ggc	2832
Val	Ser	Lys	Asp	Gln	Ser	Asn	Thr	Ile	Leu	Thr	Gly	Leu	Lys	Pro	Gly	
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atg	gaa	tat	acc	att	cat	gtg	tgg	gcc	cag	aag	ggg	gcc	cg	gag	agc	2880
Met	Glu	Tyr	Thr	Ile	His	Val	Trp	Ala	Gln	Lys	Gly	Ala	Arg	Glu	Ser	
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aag	aag	gct	gat	acc	aag	gcc	cta	aca	gaa	att	gac	cct	ccc	aga	aat	2928
Lys	Lys	Ala	Asp	Thr	Lys	Ala	Leu	Thr	Glu	Ile	Asp	Pro	Pro	Arg	Asn	
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Leu	Arg	Pro	Phe	Gly	Val	Thr	His	Ser	Gly	Gly	Val	Leu	Thr	Trp	Leu	
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ccc	cca	tct	gct	caa	att	gat	ggc	tac	att	ttg	acc	tac	cag	ttc	cca	3024
Pro	Pro	Ser	Ala	Gln	Ile	Asp	Gly	Tyr	Ile	Leu	Thr	Tyr	Gln	Phe	Pro	
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aat	ggc	acc	gtg	aag	ggg	gtg	gag	ctc	cca	aga	ggc	cag	cag	aga	ttt	3072
Asn	Gly	Thr	Val	Lys	Gly	Val	Glu	Leu	Pro	Arg	Gly	Gln	Gln	Arg	Phe	
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gaa	ttg	caa	gac	ctg	gaa	cag	gg	gtc	acc	tat	cct	gtt	tcc	ttg	gtt	3120
Glu	Leu	Gln	Asp	Leu	Glu	Gln	Gly	Val	Thr	Tyr	Pro	Val	Ser	Leu	Val	
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gcc	tcc	aaa	gg	aat	cag	cg	agc	cg	act	gtg	tct	acc	acc	ctt	tct	3168
Ala	Phe	Lys	Gly	Asn	Gln	Arg	Ser	Arg	Thr	Val	Ser	Thr	Thr	Leu	Ser	
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Thr	Val	Asp	Ala	Arg	Phe	Pro	His	Pro	Ser	Asp	Cys	Ser	Gln	Val	Gln	
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cag	aac	acc	aac	gct	gcc	agt	ggg	ctc	tac	acc	atc	tac	ctc	aat	gg	3264
Gln	Asn	Thr	Asn	Ala	Ala	Ser	Gly	Leu	Tyr	Thr	Ile	Tyr	Leu	Asn	Gly	

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acc act cgg tat gag gtg agg gca gac tta cag act ttc aat gaa tct Thr Thr Arg Tyr Glu Val Arg Ala Asp Leu Gln Thr Phe Asn Glu Ser 3504			
1155	1160	1165	
gcc tac gct gta tat gat ttc ttc caa gtg gca tcc agc aaa gag cgg Ala Tyr Ala Val Tyr Asp Phe Phe Gln Val Ala Ser Ser Lys Glu Arg 3552			
1170	1175	1180	
tac aag ctg tcg gtt ggg aaa tac aga ggc aca gcc ggg gat gct ctc Tyr Lys Leu Ser Val Gly Lys Tyr Arg Gly Thr Ala Gly Asp Ala Leu 3600			
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1265	1270	1275	1280
cgt ttc tct ggc aga aag aag cgc tcc ata gga aaa gca agg atg ttc Arg Phe Ser Gly Arg Lys Lys Arg Ser Ile Gly Lys Ala Arg Met Phe 3888			
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Cys Ser Asn Lys Glu Gln Gln Val Thr Val Ser His Thr Tyr Lys Ile  
35 40 45  
Asp Val Pro Lys Ser Ala Leu Val Gln Val Glu Thr Asp Pro Gln Ser  
50 55 60  
Leu Ser Asp Asp Gly Thr Ser Leu Leu Ala Pro Gly Glu Asp Gly Glu  
65 70 75 80  
Glu Gln Asn Ile Ile Phe Arg His Asn Ile Arg Leu Gln Thr Pro Gln  
85 90 95  
Lys Asn Cys Asp Leu Ala Asp Ser Val Gln Asp Leu Leu Ala Arg Met  
100 105 110  
Lys Lys Leu Glu Glu Met Ala Glu Leu Lys Glu Gln Cys Asn Thr  
115 120 125  
Asn Arg Cys Cys Gln Gly Ala Ala Asp Leu Ser Arg His Cys Ser Gly  
130 135 140  
His Gly Thr Phe Leu Pro Glu Thr Cys Ser Cys His Cys Asp Gln Gly  
145 150 155 160  
Trp Glu Gly Ala Asp Cys Asp Gln Pro Thr Cys Pro Gly Ala Cys Asn  
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Gly His Gly Arg Cys Val Asp Gly Gln Cys Val Cys Asp Ala Pro Tyr  
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Val Gly Val Asp Cys Ala Tyr Ala Ala Cys Pro Gln Asp Cys Ser Gly  
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His Gly Val Cys Val Gln Gly Val Cys Gln Cys His Glu Asp Phe Thr  
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Ala Glu Asp Cys Ser Glu Gln Arg Cys Pro Gly Asp Cys Ser Gly Asn  
225 230 235 240  
Gly Phe Cys Asp Thr Gly Glu Cys Tyr Cys Glu Met Gly Phe Thr Gly  
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Pro Asp Cys Ser Gln Val Val Ala Pro Gln Gly Leu Gln Leu Leu Lys  
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Ser Thr Glu Asn Ser Leu Leu Val Ser Trp Glu Pro Ser Ser Glu Val  
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Asp Tyr Tyr Leu Leu Ser Tyr Tyr Pro Leu Gly Lys Glu Gln Ala Thr  
290 295 300  
Lys Gln Val Arg Val Pro Lys Glu Gln His Thr Tyr Asp Ile Thr Gly  
305 310 315 320  
Leu Leu Pro Gly Thr Lys Tyr Ile Val Thr Leu Arg Asn Val Lys Lys  
325 330 335  
Asp Ile Ser Ser Ser Pro Gln His Leu Leu Ala Thr Thr Asp Leu Ala  
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Val Leu Gly Thr Ala Trp Val Asn Glu Glu Thr Glu Thr Ser Leu Asp  
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Ser Arg Asp Pro Lys Ser Arg Tyr Asp Ile Thr Gly Leu Gln Pro Gly  
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Thr Glu Tyr Lys Ile Thr Val Val Pro Ile Arg Gly Asp Leu Glu Gly  
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Lys Pro Ile Leu Leu Asn Gly Arg Thr Glu Ile Asp Gly Pro Thr Asn  
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Pro Val Arg Ala Asp Ile Asp Lys Tyr Val Val Arg Tyr Ile Ala Pro		
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Asp Gly Glu Thr Lys Glu Lys Ala Val Pro Lys Asp Gln Ser Ser Thr		480
485	490	495
Val Leu Thr Gly Leu Lys Pro Gly Glu Ala Tyr Lys Val Phe Val Trp		
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Thr Glu Ile Asp Ser Pro Glu Asn Leu Val Thr Asp Arg Val Thr Glu		
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Asn Ser Leu Ser Val Ser Trp Asp Pro Val Glu Ala Asp Ile Asp Arg		
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Tyr Val Val Ser Tyr Thr Ser Val Asp Gly Glu Thr Lys Gln Val Pro		560
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Val Lys Lys Asp Gln Arg Ser Thr Val Leu Thr Gly Leu Ser Pro Gly		
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Lys Lys Ala Asn Thr Lys Ala Pro Thr Asp Ile Asp Ser Pro Lys Asn		
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Leu Val Thr Asp Gln Val Thr Glu Asn Thr Leu Ser Val Ser Trp Asp		
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Pro Val Gln Ala Asn Ile Asp Arg Tyr Met Val Ser Tyr Thr Ser Ala		
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Asp Gly Glu Thr Arg Glu Val Pro Val Pro Lys Glu Lys Ser Ser Thr		
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Val Leu Thr Gly Leu Arg Pro Gly Val Glu Tyr Lys Val His Val Trp		
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Ala Gln Lys Gly Thr Gln Glu Ser Arg Lys Ala Asn Thr Lys Ala Pro		
690	695	700
Thr Asp Ile Asp Gly Pro Lys Asn Leu Val Thr Asp Gln Val Thr Glu		
705	710	715
Thr Thr Leu Ser Val Ser Trp Asp Pro Val Glu Ala Asp Ile Asp Arg		
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Tyr Met Val Arg Tyr Thr Ser Pro Asp Gly Glu Thr Lys Glu Val Pro		
740	745	750
Val Ser Lys Asp Lys Ser Ser Thr Val Leu Arg Gly Leu Arg Pro Gly		
755	760	765
Val Glu Tyr Lys Val Asp Val Trp Ala Gln Lys Gly Ala Gln Asp Ser		
770	775	780
Arg Lys Ala Asn Thr Lys Ala Pro Thr Asp Ile Asp Ser Pro Lys Asn		
785	790	795
Leu Val Thr Glu Gln Val Ala Glu Ser Thr Ala Thr Val Ser Trp Asp		
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Pro Val Glu Ala Asp Ile Asp Arg Tyr Val Val Arg Tyr Thr Ser Ala		
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Asp Gly Glu Thr Arg Glu Ile Pro Val Arg Lys Glu Lys Ser Ser Thr		
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Val Leu Thr Gly Leu Arg Pro Gly Val Glu Tyr Thr Val Gln Val Trp		
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Thr Glu Ile Asp Ser Pro Lys Asn Leu Val Thr Asn Arg Val Thr Glu		
885	890	895
Asn Thr Ala Thr Ile Ser Trp Asp Pro Val Arg Ala Asn Ile Asp Arg		
900	905	910
Tyr Met Val Arg Tyr Thr Ser Ala Asp Gly Glu Thr Lys Glu Ile Pro		
915	920	925
Val Ser Lys Asp Gln Ser Asn Thr Ile Leu Thr Gly Leu Lys Pro Gly		
930	935	940

Met Glu Tyr Thr Ile His Val Trp Ala Gln Lys Gly Ala Arg Glu Ser  
945 950 955 960  
Lys Lys Ala Asp Thr Lys Ala Leu Thr Glu Ile Asp Pro Pro Arg Asn  
965 970 975  
Leu Arg Pro Phe Gly Val Thr His Ser Gly Gly Val Leu Thr Trp Leu  
980 985 990  
Pro Pro Ser Ala Gln Ile Asp Gly Tyr Ile Leu Thr Tyr Gln Phe Pro  
995 1000 1005  
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1010 1015 1020  
Glu Leu Gln Asp Leu Glu Gln Gly Val Thr Tyr Pro Val Ser Leu Val  
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Ala Phe Lys Gly Asn Gln Arg Ser Arg Thr Val Ser Thr Thr Leu Ser  
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Thr Val Asp Ala Arg Phe Pro His Pro Ser Asp Cys Ser Gln Val Gln  
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1075 1080 1085  
Asp Ala Ser Arg Pro Met Gln Val Tyr Cys Asp Met Asp Thr Asp Gly  
1090 1095 1100  
Gly Gly Trp Ile Val Phe Gln Arg Arg Asn Thr Gly Gln Leu Asp Phe  
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Phe Lys Arg Trp Arg Ser Tyr Val Glu Gly Phe Gly Asp Pro Met Lys  
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Glu Phe Trp Leu Gly Leu Asp Lys Leu His Asn Leu Thr Thr Gly Thr  
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1155 1160 1165  
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1170 1175 1180  
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Thr Tyr His Asn Gly Trp Lys Phe Thr Thr Phe Asp Arg Asp Ser Asp  
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Lys Asn Cys His Leu Ala Asn Pro Asn Gly Lys Tyr Gly Glu Thr Lys  
1235 1240 1245  
His Ser Glu Gly Val Asn Trp Glu Pro Trp Lys Gly His Glu Phe Ser  
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gct tcg gcc cca gcc act ctg gag cct ccc ggc tgc agc aac aag gag 96  
Ala Ser Ala Pro Ala Thr Leu Glu Pro Pro Gly Cys Ser Asn Lys Glu  
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caa cag gtc act gtc agc cac acc tac aag atc gat gtg ccc aag tct 144  
Gln Gln Val Thr Val Ser His Thr Tyr Lys Ile Asp Val Pro Lys Ser  
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gcc ttg gtt cag gtt gac gct gac cct cag ccc ctc agt gac gat ggg 192  
Ala Leu Val Gln Val Asp Ala Asp Pro Gln Pro Leu Ser Asp Asp Gly  
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gct tcg ctc ttg gcc ctg ggg gag gcc agg gag gaa cag aac atc atc 240  
Ala Ser Leu Leu Ala Leu Gly Glu Ala Arg Glu Glu Gln Asn Ile Ile  
65 70 75 80

ttc agg cac aac atc cgc ctt cag acg cca cag aag gac tgc gag ttg 288  
Phe Arg His Asn Ile Arg Leu Gln Thr Pro Gln Lys Asp Cys Glu Leu  
85 90 95

gca ggc agt gtc cag gac ctc ctg gcc cgg gtg aag aag ctg gag gaa 336  
Ala Gly Ser Val Gln Asp Leu Leu Ala Arg Val Lys Lys Leu Glu Glu  
100 105 110

gag atg gtg gag atg aag gaa cag tgt agt gcc cag cgc tgc tgc cag 384  
Glu Met Val Glu Met Lys Glu Gln Cys Ser Ala Gln Arg Cys Cys Gln  
115 120 125

gga gtc act gat cta agc cgc cac tgc agc ggc cac ggg acc ttc tcc 432  
Gly Val Thr Asp Leu Ser Arg His Cys Ser Gly His Gly Thr Phe Ser  
130 135 140

ctg gag acc tgc agc tgc cac tgc gaa gag ggc agg gag ggc ccc gcc 480  
Leu Glu Thr Cys Ser Cys His Cys Glu Glu Gly Arg Glu Gly Pro Ala  
145 150 155 160

tgc gag cgg ctg gcc tgc ccc ggg gcg tgc agc ggc cac ggg cgt tgc 528  
Cys Glu Arg Leu Ala Cys Pro Gly Ala Cys Ser Gly His Gly Arg Cys  
165 170 175

gtg gac ggg cgc tgc ctg tgc cat gag ccc tac gtg ggt gcc gac tgc 576  
Val Asp Gly Arg Cys Leu Cys His Glu Pro Tyr Val Gly Ala Asp Cys  
180 185 190

ggc tac ccg gcc tgc cct gag aac tgc agc gga cac ggc gag tgc gtg 624  
Gly Tyr Pro Ala Cys Pro Glu Asn Cys Ser Gly His Gly Glu Cys Val  
195 200 205

cgc ggc gtg tgc cag tgc cac gaa gac ttc atg tcg gag gac tgc agc 672  
Arg Gly Val Cys Gln Cys His Glu Asp Phe Met Ser Glu Asp Cys Ser  
210 215 220

gag aag cgc tgt ccc ggc gac tgc agc ggc cac ggc ttc tgt gac acg 720  
Glu Lys Arg Cys Pro Gly Asp Cys Ser Gly His Gly Phe Cys Asp Thr  
225 230 235 240

ggc gag tgc tac tgc gag gac ggc ttc aca ggc ctg gac tgt gcc cag 768  
Gly Glu Cys Tyr Cys Glu Glu Gly Phe Thr Gly Leu Asp Cys Ala Gln  
245 250 255

gtg gtc acc cca cag ggc ctg cag ctg ctc aag aac acg gag gat tct 816

Val Val Thr Pro Gln Gly Leu Gln Leu Leu Lys Asn Thr Glu Asp Ser  
260 265 270

ctg ctg gtg agc tgg gag ccc tcc agc cag gtg gat cac tac ctc ctc 864  
Leu Leu Val Ser Trp Glu Pro Ser Ser Gln Val Asp His Tyr Leu Leu  
275 280 285

agc tac tac ccc ctg ggg aag gag ctc tct ggg aag cag atc caa gtg 912  
Ser Tyr Pro Leu Gly Lys Glu Leu Ser Gly Lys Gln Ile Gln Val  
290 295 300

ccc aag gag cag cac agc tat gag att ctt ggt ttg ctg cct gga acc 960  
Pro Lys Glu Gln His Ser Tyr Glu Ile Leu Gly Leu Leu Pro Gly Thr  
305 310 315 320

aag tac ata gtc acc ctg cgt aac gtc aag aat gaa gtt tct agc agc 1008  
Lys Tyr Ile Val Thr Leu Arg Asn Val Lys Asn Glu Val Ser Ser Ser  
325 330 335

cca cag cat cta ctt gcc acc aca gac ctt gct gtg ctt ggc act gcc 1056  
Pro Gln His Leu Leu Ala Thr Thr Asp Leu Ala Val Leu Gly Thr Ala  
340 345 350

tgg gtg aca gat gag act gag aac tcc ctt gac gtg gag tgg gaa aac 1104  
Trp Val Thr Asp Glu Thr Glu Asn Ser Leu Asp Val Glu Trp Glu Asn  
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ccc tca act gag gtg gac tac tac aag ctg cga tat ggc ccc atg aca 1152  
Pro Ser Thr Glu Val Asp Tyr Tyr Lys Leu Arg Tyr Gly Pro Met Thr  
370 375 380

gga cag gag gta gct gag gtc act gtg ccc aag agc agt gac ccc aag } 1200  
Gly Gln Glu Val Ala Glu Val Thr Val Pro Lys Ser Ser Asp Pro Lys  
385 390 395 400

agc cga tat gac atc act ggt ctg cac ccg ggg act gag tat aag atc 1248  
Ser Arg Tyr Asp Ile Thr Gly Leu His Pro Gly Thr Glu Tyr Lys Ile  
405 410 415

acg gtg gtg ccc atg aga gga gag ctg gag ggc aag ccg atc ctc ctg 1296  
Thr Val Val Pro Met Arg Gly Glu Leu Glu Gly Lys Pro Ile Leu Leu  
420 425 430

aat ggc agg aca gaa att gac agt cca acc aat gtt gtc act gat cga 1344  
Asn Gly Arg Thr Glu Ile Asp Ser Pro Thr Asn Val Val Thr Asp Arg  
435 440 445

gtg act gaa gac aca gca act gtc tcc tgg gac cca gtg cag gct gtc 1392  
Val Thr Glu Asp Thr Ala Thr Val Ser Trp Asp Pro Val Gln Ala Val  
450 455 460

ata gac aag tat gta gtg cgc tac act tct gct gat ggg gac acc aag 1440  
Ile Asp Lys Tyr Val Val Arg Tyr Thr Ser Ala Asp Gly Asp Thr Lys  
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gaa atg gca gtg cac aag gat gag agc agc act gtc ctg acg ggc ctg 1488  
Glu Met Ala Val His Lys Asp Glu Ser Ser Thr Val Leu Thr Gly Leu  
485 490 495

aag cca gga gag gca tac aag gtc tac gtg tgg gct gaa agg ggc aac 1536  
Lys Pro Gly Glu Ala Tyr Lys Val Tyr Val Trp Ala Glu Arg Gly Asn

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cca gca aac ctg gtg act gac cgg gtg act gag aat acc gcc acc atc Pro Ala Asn Leu Val Thr Asp Arg Val Thr Glu Asn Thr Ala Thr Ile	530	535	540	1632
tcc tgg gac ccg gta cag gcc acc att gac aag tac gtg gtg cgc tac Ser Trp Asp Pro Val Gln Ala Thr Ile Asp Lys Tyr Val Val Arg Tyr	545	550	555	1680
acc tct gct gac gac caa gag acc aga gag gtt ctg gtg ggg aag gag Thr Ser Ala Asp Asp Gln Glu Thr Arg Glu Val Leu Val Gly Lys Glu	565	570	575	1728
cag agc agc act gtc ctg aca ggc ctg agg cca ggt gtg gag tac aca Gln Ser Ser Thr Val Leu Thr Gly Leu Arg Pro Gly Val Glu Tyr Thr	580	585	590	1776
gtg cat gtc tgg gcc cag aag ggg gac cga gag agc aag aag gct gac Val His Val Trp Ala Gln Lys Gly Asp Arg Glu Ser Lys Lys Ala Asp	595	600	605	1824
acc aac gcc ccg aca gat att gac agc ccc aaa aac ctg gtg act gac Thr Asn Ala Pro Thr Asp Ile Asp Ser Pro Lys Asn Leu Val Thr Asp	610	615	620	1872
cgg gtg aca gag aat atg gcc acg gtc tcc tgg gac ccg gtg cag gcc Arg Val Thr Glu Asn Met Ala Thr Val Ser Trp Asp Pro Val Gln Ala	625	630	635	1920
gcc att gac aag tac gtg gtg cgc tac acc tct gct ggt gga gag acc Ala Ile Asp Lys Tyr Val Val Arg Tyr Thr Ser Ala Gly Gly Glu Thr	645	650	655	1968
agg gag gtt ccg gtg ggg aag gag cag agc agc aca gtc ctg aca ggc Arg Glu Val Pro Val Gly Lys Glu Gln Ser Ser Thr Val Leu Thr Gly	660	665	670	2016
ctg aga ccg ggt atg gag tac atg gtg cac gtg tgg gcc cag aag ggg Leu Arg Pro Gly Met Glu Tyr Met Val His Val Trp Ala Gln Lys Gly	675	680	685	2064
gac cag gag agc aag aag gcc gac acc aag gcc cag aca gac att gac Asp Gln Glu Ser Lys Lys Ala Asp Thr Lys Ala Gln Thr Asp Ile Asp	690	695	700	2112
agc ccc caa aac ctg gtg acc gac cgg gtg aca gag aat atg gcc act Ser Pro Gln Asn Leu Val Thr Asp Arg Val Thr Glu Asn Met Ala Thr	705	710	715	2160
gtc tcc tgg gac ccg gtg cgg gcc acc att gac agg tat gtg gtg cgc Val Ser Trp Asp Pro Val Arg Ala Thr Ile Asp Arg Tyr Val Val Arg	725	730	735	2208
tac acc tct gcc aag gac gga gag acc agg gag gtt ccg gtg ggg aag Tyr Thr Ser Ala Lys Asp Gly Glu Thr Arg Glu Val Pro Val Gly Lys	740	745	750	2256

gag cag agt agc act gtc ctg acg ggc ctg agg ccg ggt gtg gag tac	2304
Glu Gln Ser Ser Thr Val Leu Thr Gly Leu Arg Pro Gly Val Glu Tyr	
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acg gtg cac gtg tgg gcc cag aag ggg gcc cag gag acg aag aag gct	2352
Thr Val His Val Trp Ala Gln Lys Gly Ala Gln Glu Ser Lys Lys Ala	
770 775 780	
gac acc aag gcc cag aca gac att gac acg ccc caa aac ctg gtc act	2400
Asp Thr Lys Ala Gln Thr Asp Ile Asp Ser Pro Gln Asn Leu Val Thr	
785 790 795 800	
gac tgg gtg aca gag aat aca gcc act gtc tcc tgg gac ccg gtg cag	2448
Asp Trp Val Thr Glu Asn Thr Ala Thr Val Ser Trp Asp Pro Val Gln	
805 810 815	
gcc acc att gac agg tat gtg gtg cac tac acg tct gcc aac gga gag	2496
Ala Thr Ile Asp Arg Tyr Val Val His Tyr Thr Ser Ala Asn Gly Glu	
820 825 830	
acc agg gag gtt cca gtg ggg aag gag cag acg acg act gtc ctg acg	2544
Thr Arg Glu Val Pro Val Gly Lys Glu Gln Ser Ser Thr Val Leu Thr	
835 840 845	
ggc ctg agg ccg ggc atg gag tac acg gtg cac gtg tgg gcc cag aag	2592
Gly Leu Arg Pro Gly Met Glu Tyr Thr Val His Val Trp Ala Gln Lys	
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Gly Asn Gln Glu Ser Lys Lys Ala Asp Thr Lys Ala Gln Thr Glu Ile	
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gac ggc ccc aaa aac cta gtg act gac tgg gtg acg gag aat atg gcc	2688
Asp Gly Pro Lys Asn Leu Val Thr Asp Trp Val Thr Glu Asn Met Ala	
885 890 895	
act gtc tcc tgg gac ccg gtt cag gcc acc att gac aag tac atg gtg	2736
Thr Val Ser Trp Asp Pro Val Gln Ala Thr Ile Asp Lys Tyr Met Val	
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cgc tac acc tct gct gac gga gag acc agg gag gtt ccg gtg ggg aag	2784
Arg Tyr Thr Ser Ala Asp Gly Glu Thr Arg Glu Val Pro Val Gly Lys	
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gag cac agc agc act gtc ctg acg ggc ctg aga cca ggc atg gag tac	2832
Glu His Ser Ser Thr Val Leu Thr Gly Leu Arg Pro Gly Met Glu Tyr	
930 935 940	
atg gtg cac gtg tgg gcc cag aag ggg gcc cag gag acg aag aag gct	2880
Met Val His Val Trp Ala Gln Lys Gly Ala Gln Glu Ser Lys Lys Ala	
945 950 955 960	
gac acc aag gcc cag aca gaa ctc gac cct ccc aga aac ctt cgt cca	2928
Asp Thr Lys Ala Gln Thr Glu Leu Asp Pro Pro Arg Asn Leu Arg Pro	
965 970 975	
tct gct gta acg cag tct ggt ggc ata ttg acc tgg acg ccc ccc tct	2976
Ser Ala Val Thr Gln Ser Gly Gly Ile Leu Thr Trp Thr Pro Pro Ser	
980 985 990	

gct cag atc cac ggc tac att ctg act tac cag ttc cca gat ggc aca Ala Gln Ile His Gly Tyr Ile Leu Thr Tyr Gln Phe Pro Asp Gly Thr 995 1000 1005	3024
gtt aag gag atg cag ctg gga cg <sup>g</sup> gaa gac cag agg ttt gc <sup>g</sup> ttg caa Val Lys Glu Met Gln Leu Gly Arg Glu Asp Gln Arg Phe Ala Leu Gln 1010 1015 1020	3072
ggc ctt gag caa ggc gcc acc tac cct gtc tcc ctt gtt gcc ttt aag Gly Leu Glu Gln Gly Ala Thr Tyr Pro Val Ser Leu Val Ala Phe Lys 1025 1030 1035 1040	3120
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gcc cgt ttc cca cac cct tcg gac tgc agt cag gtt cag cag aac agc Ala Arg Phe Pro His Pro Ser Asp Cys Ser Gln Val Gln Gln Asn Ser 1060 1065 1070	3216
aat gcc gcc agt ggt ctg tac acc atc tac ctg cat ggc gat gcc agc Asn Ala Ala Ser Gly Leu Tyr Thr Ile Tyr Leu His Gly Asp Ala Ser 1075 1080 1085	3264
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att gtc ttc cag agg cgg aac act ggg cag ctg gat ttc ttc aag cga Ile Val Phe Gln Arg Arg Asn Thr Gly Gln Leu Asp Phe Phe Lys Arg 1105 1110 1115 1120	3360
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ctt gga ctt gac aag cta cac aac ctc acc acc ggc act cca gc <sup>g</sup> cgg Leu Gly Leu Asp Lys Leu His Asn Leu Thr Thr Gly Thr Pro Ala Arg 1140 1145 1150	3456
tat gag gtg aga gtg gat tta cag act gcc aat gaa tct gcc tat gct Tyr Glu Val Arg Val Asp Leu Gln Thr Ala Asn Glu Ser Ala Tyr Ala 1155 1160 1165	3504
ata tat gat ttc ttc caa gtg gcc tcc agc aag gag cgg tat aag ctg Ile Tyr Asp Phe Phe Gln Val Ala Ser Ser Lys Glu Arg Tyr Lys Leu 1170 1175 1180	3552
aca gtt ggg aaa tac aga ggc acg gca ggg gat gct ctt act tac cac Thr Val Gly Lys Tyr Arg Gly Thr Ala Gly Asp Ala Leu Thr Tyr His 1185 1190 1195 1200	3600
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cac ttg gcc aac cct aat ggc aga tat ggg gag acc aag cac agt gag	3744

His	Leu	Ala	Asn	Pro	Asn	Gly	Arg	Tyr	Gly	Glu	Thr	Lys	His	Ser	Glu	
1235						1240						1245				
ggg	gtg	aac	tgg	gag	cct	tgg	aaa	gga	cat	gaa	ttc	tcc	att	cct	tac	3792
Gly	Val	Asn	Trp	Glu	Pro	Trp	Lys	Gly	His	Glu	Phe	Ser	Ile	Pro	Tyr	
1250						1255					1260					
gtg	gag	ttg	aaa	atc	cgc	cct	cat	ggc	tac	agc	agg	gag	cct	gtc	ctg	3840
Val	Glu	Leu	Lys	Ile	Arg	Pro	His	Gly	Tyr	Ser	Arg	Glu	Pro	Val	Leu	
1265						1270					1275				1280	
ggc	aga	aag	aag	cgg	acg	ctg	aga	gga	agg	ctg	cga	acg	ttc	tga		3885
Gly	Arg	Lys	Lys	Arg	Thr	Leu	Arg	Gly	Arg	Leu	Arg	Thr	Phe	*		
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Gln Gln Val Thr Val Ser His Thr Tyr Lys Ile Asp Val Pro Lys Ser  
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Ala Ser Leu Leu Ala Leu Gly Glu Ala Arg Glu Glu Gln Asn Ile Ile  
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Phe Arg His Asn Ile Arg Leu Gln Thr Pro Gln Lys Asp Cys Glu Leu  
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Ala Gly Ser Val Gln Asp Leu Leu Ala Arg Val Lys Lys Leu Glu Glu  
100 105 110  
Glu Met Val Glu Met Lys Glu Gln Cys Ser Ala Gln Arg Cys Cys Gln  
115 120 125  
Gly Val Thr Asp Leu Ser Arg His Cys Ser Gly His Gly Thr Phe Ser  
130 135 140  
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Cys Glu Arg Leu Ala Cys Pro Gly Ala Cys Ser Gly His Gly Arg Cys  
165 170 175  
Val Asp Gly Arg Cys Leu Cys His Glu Pro Tyr Val Gly Ala Asp Cys  
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Glu Lys Arg Cys Pro Gly Asp Cys Ser Gly His Gly Phe Cys Asp Thr  
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275 280 285  
Ser Tyr Tyr Pro Leu Gly Lys Glu Leu Ser Gly Lys Gln Ile Gln Val  
290 295 300

Pro Lys Glu Gln His Ser Tyr Glu Ile Leu Gly Leu Leu Pro Gly Thr  
305 310 315 320  
Lys Tyr Ile Val Thr Leu Arg Asn Val Lys Asn Glu Val Ser Ser Ser  
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Pro Gln His Leu Leu Ala Thr Thr Asp Leu Ala Val Leu Gly Thr Ala  
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Ser Arg Tyr Asp Ile Thr Gly Leu His Pro Gly Thr Glu Tyr Lys Ile  
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450 455 460  
Ile Asp Lys Tyr Val Val Arg Tyr Thr Ser Ala Asp Gly Asp Thr Lys  
465 470 475 480  
Glu Met Ala Val His Lys Asp Glu Ser Ser Thr Val Leu Thr Gly Leu  
485 490 495  
Lys Pro Gly Glu Ala Tyr Lys Val Tyr Val Trp Ala Glu Arg Gly Asn  
500 505 510  
Gln Gly Ser Lys Lys Ala Asp Thr Asn Ala Leu Thr Glu Ile Asp Ser  
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Pro Ala Asn Leu Val Thr Asp Arg Val Thr Glu Asn Thr Ala Thr Ile  
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755 760 765  
Thr Val His Val Trp Ala Gln Lys Gly Ala Gln Glu Ser Lys Lys Ala  
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Gly Leu Arg Pro Gly Met Glu Tyr Thr Val His Val Trp Ala Gln Lys			
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Asp Gly Pro Lys Asn Leu Val Thr Asp Trp Val Thr Glu Asn Met Ala			
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Thr Val Ser Trp Asp Pro Val Gln Ala Thr Ile Asp Lys Tyr Met Val			
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Arg Tyr Thr Ser Ala Asp Gly Glu Thr Arg Glu Val Pro Val Gly Lys			
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Glu His Ser Ser Thr Val Leu Thr Gly Leu Arg Pro Gly Met Glu Tyr			
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Met Val His Val Trp Ala Gln Lys Gly Ala Gln Glu Ser Lys Lys Ala			
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Asp Thr Lys Ala Gln Thr Glu Leu Asp Pro Pro Arg Asn Leu Arg Pro			
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Ser Ala Val Thr Gln Ser Gly Gly Ile Leu Thr Trp Thr Pro Pro Ser			
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Ala Gln Ile His Gly Tyr Ile Leu Thr Tyr Gln Phe Pro Asp Gly Thr			
995	1000	1005	
Val Lys Glu Met Gln Leu Gly Arg Glu Asp Gln Arg Phe Ala Leu Gln			
1010	1015	1020	
Gly Leu Glu Gln Gly Ala Thr Tyr Pro Val Ser Leu Val Ala Phe Lys			
1025	1030	1035	1040
Gly Gly Arg Arg Ser Arg Asn Val Ser Thr Thr Leu Ser Thr Val Gly			
1045	1050	1055	
Ala Arg Phe Pro His Pro Ser Asp Cys Ser Gln Val Gln Gln Asn Ser			
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Asn Ala Ala Ser Gly Leu Tyr Thr Ile Tyr Leu His Gly Asp Ala Ser			
1075	1080	1085	
Arg Pro Leu Gln Val Tyr Cys Asp Met Glu Thr Asp Gly Gly Gly Trp			
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Ile Val Phe Gln Arg Arg Asn Thr Gly Gln Leu Asp Phe Phe Lys Arg			
1105	1110	1115	1120
Trp Arg Ser Tyr Val Glu Gly Phe Gly Asp Pro Met Lys Glu Phe Trp			
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Leu Gly Leu Asp Lys Leu His Asn Leu Thr Thr Gly Thr Pro Ala Arg			
1140	1145	1150	
Tyr Glu Val Arg Val Asp Leu Gln Thr Ala Asn Glu Ser Ala Tyr Ala			
1155	1160	1165	
Ile Tyr Asp Phe Phe Gln Val Ala Ser Ser Lys Glu Arg Tyr Lys Leu			
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Thr Val Gly Lys Tyr Arg Gly Thr Ala Gly Asp Ala Leu Thr Tyr His			
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Asn Gly Trp Lys Phe Thr Thr Phe Asp Arg Asp Asn Asp Ile Ala Leu			
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Ser Asn Cys Ala Leu Thr His His Gly Gly Trp Trp Tyr Lys Asn Cys			
1220	1225	1230	
His Leu Ala Asn Pro Asn Gly Arg Tyr Gly Glu Thr Lys His Ser Glu			
1235	1240	1245	
Gly Val Asn Trp Glu Pro Trp Lys Gly His Glu Phe Ser Ile Pro Tyr			
1250	1255	1260	
Val Glu Leu Lys Ile Arg Pro His Gly Tyr Ser Arg Glu Pro Val Leu			
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<220>  
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<210> 9  
<211> 24  
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<222> (1)...(24)
<223> First PCR primer for sequencing 5' end

<400> 9
aggagatggg ggctgtattt tcgg                                24

<210> 10
<211> 24
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<220>
<221> primer_bind
<222> (1)...(24)
<223> First PCR primer for sequencing 5' end

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agcctcttgc tgagtggaga tgcc                                24

<210> 11
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<223> Second PCR primer for sequencing 5' end

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<220>
<221> primer_bind
<222> (1)...(22)
<223> Second PCR primer for sequencing 5' end

<400> 12
ttatgatgtg ccagattatg cc                                22

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<223> First PCR reaction for sequencing 3' end

<400> 13
ctcaaattga tggctacatt ttgacc                                26

<210> 14
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<211> 24  
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<220>  
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<400> 15  
taccagttcc caaatggcac cg 22

<210> 16  
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<220>  
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aaacctctgg cgaagaagtc c 21

<210> 17  
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<400> 17  
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<210> 18  
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<220>  
<221> primer\_bind  
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<222> (1)...(28)	
<223> hTNW3	
<400> 19	
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<210> 20	
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<221> primer_bind	
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<210> 28	
<211> 29	

<212> DNA  
<213> Homo sapiens

<220>  
<221> primer\_bind  
<222> (1)...(29)  
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<400> 28  
gaggatcctc agtgatggtg atggtgatg

29